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ORIGINAL ARTICLES

PRACTICAL EUGENICS.*

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Eugenics may be defined as the science of race improvement by the application of the laws of heredity. Medically speaking, it is what might be called a prophylaxis (preventive) against further impairment of the human race. When we consider that of the 2,500,000 children that are born in the United States annually, there are about four per cent of this number, or 100,000, who are so defective, mentally, physically or morally, as to be a burden to themselves and others; and that one-fifth, or 500,000, of the total number are so weak and unfitted for life's battle that they die in infancy or early childhood; and that one-half of the total number born annually die before reaching their twenty-third year, we must see that bad or vicious heredity is the cause of such incalculable economic waste, not to speak of the sadness and race impairment brought about by such an ominous sociological state of things. When we find that there are yearly cared for in the hospitals, asylums and homes in the United States over 300,000 insane and feeble-minded, over 150,000 criminals in and outside of prisons; several hundred thousands in our almshouses and similar charitable institutions, and over 150,000 blind and deaf; besides the thousands of "monkey geniuses" and inspired idiots and fools of all ages, we naturally ask where will these serious conditions, racially and sociologically and economically, finally lead? While bad environment is the cause of some of these conditions, bad heredity is clearly the chief cause. It is well understood from a thorough study, extending over many years, of thousands of criminals, juvenile delinquents and persons of notoriously bad moral character that considerably over one-half of these troublesome classes possess inherited, inborn defects, which account for their abnormal conduct and condition. Many of them are strikingly abnormal in their physical make-up, having anthropological faces and bodies and other marks of stigmata (signs of degeneration in their faces and bodies) of an inherited type.

It is this cause we, as physicians and humanitarian workers, have studied and which we ask you to consider with a view of so arousing the great public — the average thinking man and woman — that we can put into operation better rules and laws bearing on this subject in order to breed a better race. But before we discuss this phase of the subject, that is the prevention of racial impairment or what physicians term prophylaxis, attention is invited to some of the basic laws governing heredity, or the inheritance by the child of the qualities and traits, mental, moral and physical, of the parents. The question of children inheriting the characteristics of their parents, grandparents and great-grandparents is well settled not only in science but in the popular mind. "Like father, like son," is a very old saying, having its foundation in the simplest laws of heredity. This is so true that it has been said by eugenic scientists that every trait of a child has been inherited — some from its parents; some from its grandparents and some from its great-grandparents; the different traits very much like the arrangement of the different colored tiles which lie side by side in a tiled floor — some traits like some individual tiles black and bad, some white and pure, while others are good, bad and indifferent,

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exactly according to the traits, mental, moral and physical, possessed by the parents, grandparents and great-grandparents and in the proportions stated by Galton's Law of Inheritance, which is that as an average in hundreds of thousands of cases we inherit one-fourth from each parent, one-sixteenth from each grandparent, one-sixty-fourth from each great-grandparent, the remaining eighth being the result of the efforts of ourselves; this latter one-eighth being derived from what has been called our higher heredity of ourselves. Mendel's law is also frequently quoted in these studies. According to Mendel all our characteristics are inherited, as so-called unit characters from each parent, and these are stated by Davenport as being inherited as single, simplex or as multiplex characters, or if certain characters do not exist at all in either parent, as nulliplex characters. His theory presupposes that these unit characters are transmitted by each parent to the child by a process of amphymixis, which means that in the union of the sex cells of both parents to form the child, character determiners (chromosones) are developed in the future child in proportion exactly as they may be possessed by each parent, for example:

If one parent has the characteristic simplex and the other duplex, then half the offspring will have it simplex and the other duplex. The inheritance or non-inheritance of some of these traits like hair, the color of the eyes, etc., which so well illustrates the precision of the modern science of heredity, though originally considered to be immaterial to well-being, are important, if the observations of Major C. E. Woodruff, that pigmentation protects individuals from the injurious effects of the tropical sun's rays, etc., can be accepted.

Dr. A. J. Rosanoff, following the Mendelian theory and applying it to the inheritance of insanity and neuropathic states, has formulated the theoretical expectation of different kinds of offspring, as follows:

(1) Both parents being insane, all the children will be insane.

(2) One parent being normal but with an inherited insane taint from his ancestors, and the other parent being frankly insane, half the children will be normal and the other half will be insane; but even the normal children from such a mating will carry the taint of insanity in their germ plasm and will be capable of transmitting it to subsequent generations.

(3) One parent being normal and of pure normal ancestry and the other parent being insane, all the children will be normal but will all carry the insane taint in their germ plasm.

(4) Both parents being normal but each with the insane taint from the ancestors, one-fourth of the children will be normal and not capable of transmitting insanity to their progeny; one-half will be normal but capable of transmitting the insane make-up, and the remaining one-fourth will be insane.

(5) Both parents being normal, one of pure normal stock and the other with the insane taint from his ancestors, all the children will be normal, but half of them will carry the taint of insanity in their germ plasm.

(6) Both parents being normal and of pure normal stock, all the children will be normal and entirely free from the taint of insanity.

Theoretical expectations and actual findings, as related to the Mendelian theory, do not, as is to be expected, always show an exact correspondence but are expression of possible chance. Dr. Rosanoff's tables relating to neuropathic offspring and normal offspring, according to the Mendelian theory, are well worth studying and justify the conclusion, he thinks, that insanity is transmitted from generation to generation according to the Mendelian theory.

These six possible combinations should always be borne in mind in our efforts to solve the marriage and mating problem of not only those suffering with the frank symptoms of inherited insanity but those normals with whose sane and human feelings and instincts are more difficult to deal with in this regard because many of these often

represent the highest and most admirable qualities of heart and mind.

The study of the laws of heredity prove that there is a direct inheritance of (and diathesis to) such mental and neuropathic diseases as the manic-depressive psychosis, dementia præcox, epilepsy, imbecility, idiocy, feeble-mindedness, Huntington's chorea, Friedrich's disease (hereditary ataxia), Thompson's disease, familial tremors, muscular atrophies and dystrophies, multiple sclerosis, cerebral hemorrhage, arteriosclerosis and senility, the neuropathic constitution, etc., as well as the diathesis to tuberculosis, diseases of the respiratory mucous membranes, syphilitic taints, heart diseases, eye defects, rheumatism, kidney diseases, skin diseases, etc., as well as cases of alcoholism that are apparently inherited and which must be included in this large class of inherited mental or neuropathic diseases, as must also a certain class of mentally and morally explosive persons who find it impossible to control their impulses and animal instincts.

The germ plasm or germ cells are differentiated from the body or some cells very early in the course of development and reside in the ovaries and testes, being, to a degree, out of relation to the body cells and leading a relatively independent existence except for the fluids surrounding them and from which they derive nourishment. This gives rise to *the theory of the continuity of the germ plasm*, which means that they, the sex cells, carry on through all generations the hereditary factors from individual to individual, practically uninfluenced by what may occur in the body at large, so that regardless of such accidents to the body, as for example the loss or mutilation of a limb, or other similar changes, or the acquirement of some special skill in one direction, the germ cells are uninfluenced and carry on from generation to generation only what they originally contained.

They admit that the germ plasm itself possesses all the marvelous potentialities which is necessary to account for the highest development of mankind.

If Weissmann is right in his contention that no acquired characteristics can be transmitted to posterity, then all of the achievements of our education, training and civilization, which have been so rapid in their strides since the invention of the printing press, are completely lost, so far as they affect the inate character of posterity. While all authorities agree with Weissmann that the so-called inate or inborn traits are sure to be transmitted, many authorities believe that the effects of all these acquired characteristics so react on the body and mind and moral nature of human beings that they result in corresponding variations, which have commenced long ago, as a result of these intrinsic forces.

As contrasted with Weissmann's theory the Lamarckian theory insists that structures came into existence or went out of existence by the results of use or disuse.

Some of the great Laws of Eugenics, like the Law of Averages and the Laws of Evolution, have enabled us to preserve what sanity and stability we have.

Abraham Lincoln and many others of the world's notables, who sprang from high average, rugged, hard-headed ancestors, who, like Lincoln's immediate ancestors, had a good lineage generations back and an immediate ancestry that was a pure-bred, hardy and healthy stock, in the sense that their transmitted characteristics were convergent or cumulative in the person of Lincoln. The same may be said of the famous Adams family of Massachusetts, father and son Presidents of the United States. It is interesting to note in this connection, on the authority of Reibmayr, that genius does not carry down the stock and that on the contrary it is a remarkable fact that the male line where there are children rarely extends beyond the third generation.

No generation either of man or animals or plants determines or provides the future of the race, as a small percentage, as a rule, of any species reach maturity and only about one-tenth of those give birth to the next generation. This one-tenth, as Saleeby says, in the long run, make history, and a Kant or a

Spencer dying childless may leave what we call immortal works, but unless they and their class become parents or unless the average parents of *each* generation are rightly chosen or selected, a new and inferior generation may at any time arise, to whom the greatest achievements of past generations are as nothing—"As pearls before swine."

The world may, however, owe much to some of its geniuses whose extraordinary mental abilities may have been, as pointed out by Lambrosa, the expression of epileptic equivalents, or the "degeneration of genius," without the force of which we may not have had the influences of some of our greatest reformers, like the prophet Mahommed, Joan of Arc, and others.

Since the individual is only the product of what is in his father and mother (plus the individual's environment), mating is a matter of vital importance, and it is in this matter that physicians can, by employing the Laws of Eugenics, be of the greatest service to posterity and to those who are wise enough to consult them regarding proper mating. By this practice the physician can, more than any other social agent, help to eliminate inheritance of bad traits and the tendency to many diseases, particularly mental diseases. It has been pointed out that a man or a woman born of diseased parents, being themselves normal (although having the bad inheritance in their bodies as recessive), may by mating with normals who have no such tendency, produce mostly healthy children, and can in the end, in a comparatively few generations, eliminate many diseases. These children and their children by normal matings may have children in whom no trace of the original taint will appear.

In spite of the best mating, we shall for a long time have defectives in our midst. How are we to deal with these defectives, physical, mental and moral, whose propagation of their kind would soon contaminate the race and which indeed is contaminating the race? Race improvement must rest on "selection," good or bad. In other words, a wise process of selection will determine the future welfare of the race. The fundamental factors in that wise selection or, as it may be called, "artificial selection" would work practically for this desired result — a result on which depends either the glory or the downfall of the republic. Parenthood with the race is everything.

Such environmental factors as are within the province of the State and Nation to modify and control, as well as the educational and religious training and all the surroundings that our civilization has brought, both good and bad, must, according to the concensus of opinion on this subject, influence heredity, as is shown in the familiar cases where vicious environment has caused alcoholism and alcoholism in its turn has caused in successive generations disease, pauperism, insanity and crime. Again the importance of good environmental conditions is emphasized by the fact that the thousands of weaklings have an inherited toxic poison, syphilis, etc. (and even the fœtus influenced in utero by these poisons, after the birth of the child and its removal from the tissues and fluids of the diseased mother), tends to immediately rebound in an effort to gain normal character. The same may be said of children born of tuberculous or anæmic and otherwise enfeebled mothers and fathers.

Such a widespread campaign of education of the people as to the truths of heredity and Eugenics and as to the means of race improvement, should be accompanied by plain warnings as to the danger of unfit matings, and at the same time confidential, free medical advice to the poor should be provided for by law, so that those interested would be stimulated and encouraged to discuss this question as widely as possible and to seek counsel and advice from physicians and others competent to counsel and advise them in the matter of the importance of tainted persons marrying none but normals of a pure-bred stock.

We have only to recall case after case in our own experience and to look up some of the thousands of charts that are accessible showing the lamentable consequences of such

unsuitable matings to be impressed that the final elimination of insanity and many other hereditary diseases by the education of this large class of normal recessives in this direction, would prove on our part and on the part of the nation worthy of any effort and expense. In solving the problem we must also have in mind how neuropathic and other tainted stock is developed by bad mating out of an original healthy stock and how even epilepsy, insanity and neuropathic and psychopathic states have been thus developed through a number of generations, notwithstanding Nature is always trying to end or mend by "natural selection," sexual selection —aided by anticipation—a stock that has become degenerate. As illustrating the seeming elimination of even epilepsy and several generations of tainted stock by suitable matings of the normal recessives of that stock, and also as illustrating the development of epilepsy, insanity, neuropathic and psychopathic states in previously healthy stock by matings with tainted stock, the hereditary charts and family histories prepared by F. W. Mott, an eminent English authority, are illuminating and suggestive along the lines of the main point of my paper, that is, some practical, unsensational suggestions that would, if followed, lessen the preventable race impairment that is now admittedly going on.

It is not claimed that the beneficial principles will or can be so rapidly carried out as to produce in a few decades a perfect race of super-men or super-women, or physical or mental giants, but it is insisted that if its great underlying laws are sufficiently understood and seriously considered, that fair-minded men and women will admit that the present investigations and known truths regarding Eugenics justify the full acceptance of certain generalities on this subject, which if properly applied would lead to the immense improvement of the race by better breeding and the elimination of a vast number of preventable mental and other diseases.

OPEN-AIR LIFE.

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The value of pure air in treatment of tuberculosis can not be overestimated. Areteus knew this and advised his patients not to cover their heads while sleeping. Pure air containing a normal amount of oxygen free from foreign substances is essential alike to the well or sick. The thing to be most carefully studied is the conditions under which patients must live to secure pure air; a good deal of misunderstanding exists with the profession and laity as to the best means for supplying fresh air to patients. What is commonly termed open-air treatment means to most persons living outdoors and that pure air can not be obtained except by tent and shack life. Another wrong belief is very prevalent that certain localities or altitudes furnish to patients a superior quality of air. We must remember that the atmosphere is a constantly shifting gaseous volume that is never still: the air in one locality today may be hundreds of miles away tomorrow, and counter air-currents are ever mixing atmosphere from distant localities. A very erroneous opinion is largely entertained that air at high altitudes contains a greater per cent of oxygen than at sea level. This is not true. A very useful series of examinations of air content both as to relative quantity of oxygen and foreign substances was made some fifteen years ago in Philadelphia. Air was secured from all parts of the United States. The amount of oxygen contained in all specimen was almost uniform; that containing the least was collected from Pike's Peak. The purest specimen, containing the least foreign substances, was secured over the Atlantic Ocean one hundred miles off the coast. No doubt the mistaken idea that the higher strata of air contained a greater proportion of oxygen came from its specific gravity, that its lightness would cause it to ascend and accumulate high up in the atmosphere. But we must not forget that all vegetation exhales oxygen and as we ascend

beyond the line of forests and vegetable growth an appreciable lessening of free oxygen is found. Therefore, from the standpoint of securing a greater amount of oxygen, sending patients to high altitudes is a mistake. Another incorrect view is that cold air is purer than warm air. Cold air does not mean pure air; neither does warm air mean impure air. People could not live in cold countries had Nature not provided means for warming the air before it reaches the lungs. Sending tubercular patients to high cold climates overtaxes the mucus membranes of the upper air passages.

Another misunderstanding as to the best quality of air to breathe is that dry air is best, especially for tubercular subjects. To correctly settle this question we need only study the physiology of the upper air passages. The nose was made especially to breathe through; the mucus membrane of the nasal passages is abundantly supplied with serous glands to furnish moisture to dry air that would be highly irritating to the lungs. The best air to breathe is that of a humidity of from seventy-five to eighty per cent.

The question then is: How can tubercular patients best be supplied with normal air of proper humidity and temperature? Does the so-called open-air treatment, as commonly understood and practiced, accomplish this purpose? Unless proper conditions attend outdoor living, and so frequently they do not, much harm is often done the patient. The fact that must never be forgotten is, we are dealing with a disease of a vital organ, and a debilitated patient. Although air may enter the cells of an inflamed lung, but little can pass through the congested mucus tissue into the blood. All conditions that may draw upon the energies of the patients must be avoided. He must be placed under conditions and control that will enable him to live with the least amount of oxygen. Tent and shack life can scarcely be made to meet these requirements. Fresh air must be supplied, but under surroundings that patients receive it without exertion and exposure. It is very difficult to properly care for and protect patients living in camps.

Treating tuberculosis consists of numerous small details all very important, many of which are overlooked or impossible to meet under camp conditions.

By open-air life we should mean placing the patient in comfortable quarters, free from all exposure, with ventilation so perfect that each breath is new air, surrounded with conveniences that make possible the absolute control of the patient's conduct and the full compliance with the smallest detail of treatment. Simply living outdoors, unaccompanied with other necessities, is a waste of time and has lead to thousands of deaths.

A paradoxical state of mind exists with the public concerning tuberculosis. There has been so much talk of the dreaded great white plague that the public has been filled with fear and consumptives are shunned as lepers. Then with this awfulness of the disease absorbing their minds they attempt to minimize the requirements for prevention and cure of the malady. With many doctors, and practically all the laity, all that is thought necessary is open-air life, eating raw eggs, and drinking plenty of sweet milk, the patient usually taking care of himself as long as his strength enables him to do so.

Treating tuberculosis is one of the most difficult and exacting fields of medicine. Until the profession becomes more familiar with the methods absolutely necessary to combat the disease, and the minds of the people are disabused of the fallacies they are confidently relying upon for relief, but little progress will be made.

DIAGNOSIS AND TREATMENT OF MYOCARDITIS.

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The diagnosis of myocarditis in many cases is made more from inference than definite signs, especially so in acute myocarditis.

The most characteristic signs of myocardial weakness is dilatation of the heart. The

heart is usually but by no means always rapid. Sounds may be clear but usually short and sharp. A galloping rhythm or a presystolic beat may be present, and very commonly we hear a soft systolic murmur over the apex or tricuspid area. The second pulmonic sound is accentuated. Arrhythmia present in many cases.

In uninfectious diseases, when the symptoms are out of proportion to the severity of the disease, it is presumative evidence of myocardial weakness. In such cases the symptom complex of restlessness, marked dullness over cardiac area, constriction over chest, precardial pain, vomiting and cyanosis is practically pathognomonic of acute myocarditis.

The symptoms of chronic myocarditis are usually those of gradually developing cardiac weakness, progressively increasing weakness and dysphonia, at first on exertion, later when at rest, finally reaching the stage of orthopœa. Palpitation and precardial pain are frequent symptoms, associated with sudden dilatation of the heart; swelling of abdomen, œdema of feet and legs, dimunition in the amount of urine passed; sugar, cyanosis, dilatation of venules, especially over face, and engorgement of larger veins; marked dilatation of heart with arrhythmia and systalic murmur at apex, and enlarged liver.

Treatment: Acute myocarditis differs from chronic in treatment, as acute myocarditis is only a temporary condition. In the acute form the aim is to allow the heart muscle to return to its normal state, while in the chronic form this can not be hoped for. Accordingly, even in the mildest form of acute myocarditis rest is the most essential. Keep in bed at least two weeks after all indications of myocardial weakness have subsided. Ice bag to precardium, small blister may be applied over cardiac area. Potassium or sodium iodide in small doses. The use of digitalis is a debatable question, its use depending upon the changes in the heart muscle. Digitalis spurs the heart on and raises the strength of the contraction, but it does not raise the limit strength. Therefore, when the limit strength is reached and digitalis is used, it drives the heart to overstrain and death. If given, it should be given in small doses. Strychnine and caffeine are useful drugs, but the beneficial or harmful effects are less marked than by digitalis.

To summarize: In acute myocarditis absolute rest in bed, ice bag to precardium, or fly blister, small doses of strychnine, caffeine or digitalis, and bowels well open.

The treatment of chronic myocarditis is similar to the acute, but we can never hope for the heart to return to the normal condition. Therefore the general plan of treatment is rest in bed during the severe stages of failure, purgation, light diet, digitalis or strophanthus in severe cases, graduated exercises. The introduction of strophanthus intravenously gives remarkable results in some cases. Amyl nitrite or sodium nitrite for stenocardial attacks. Even at times venesection has tided over many patients and prolonged their life for some time. Morphine is an excellent drug at times, but dangerous on account of the habit-forming properties.

RELATION OF THE PANCREAS TO DIABETES.

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The essential feature of diabetes is a disturbance in the carbohydrate metabolism, as a result of which an excessive amount of sugar accumulates in the blood. The factors bringing about this result are not definitely known. Great progress was made when it was discovered that complete extirpation of the pancreas in dogs is invariably followed by diabetes. The conclusion seemed warranted that the pancreas supplied an internal secretion essential to carbohydrate metabolism. Some observers attributed the results of pancreatic extirpation to a disturbance of the nervous mechanism, but since, if the pancreas is excised and a piece is transplanted under the skin, diabetes does not occur, despite the fact that the nerves about the pancreas suffer

the same injury, this conclusion is not warranted.

MacCallum tied off a part of the pancreas from the rest and allowed it to undergo atrophy for a year. At this time the remainder of the pancreas was extirpated and after a transient glycosuria the dog recovered completely. A subsequent removal of the atrophied part caused an intense and persistent glycosuria.

Extirpation of the pancreas is followed by the disappearance of glycogen from the liver and muscles. The pancreatic theory is supported by the observations of Opie, Weichselbaum, Cecil, and others, that the organ more commonly diseased in diabetes is the pancreas. A variety of changes have been discovered, but the islands of Langerhans are most frequently affected.

Allen, in his experiments, found that the removal of nine-tenths of the pancreas produced in dogs a severe and rapidly fatal diabetes. When a somewhat larger portion than one-tenth was preserved, a milder type of diabetes resulted which lasted for some months and then led to the death of the animal. When a still larger fragment was allowed to remain, the dog became potentially diabetic. That is, during starvation or on a meat diet, no sugar was excreted, but sugar was excreted when fed on bread. When a still larger portion of the pancreas was allowed to remain, no sugar was excreted on a meat or on a bread diet, and the animal maintained a fairly normal existence, but if sugar was given, glycosuria appeared. By continued sugar feeding, a permanent diabetes is established, a return to a meat diet failing to remove the sugar from the urine.

These researches prove that diabetes — at least in the experimental animal — is connected with insufficiency of the pancreatic function, which may be brought about abruptly by the removal of nine-tenths of the pancreas, or gradually by exhausting the functional power of the remainder of the organ, when a smaller portion is removed.

Allen applies these facts to man and holds that diabetes must be looked upon as a weakness or exhaustion of the pancreatic function. Allen assigns to the pancreas in carbohydrate metabolism the function of supplying a chemical substance or amboceptor, by means of which the sugar is able to combine with the tissue cells. The amboceptor is secreted by the islands of Langerhans. In its absence the tissues are unable to utilize the sugar that is brought to them.

While the pancreatic theory of diabetes is generally accepted, some hold to the pluriglandular theory, according to which diabetes is due not alone to a disturbance of the pancreas, but also to a disturbance of the various ductless glands, and of the liver. It has been found that glycosuria can be produced by injections of adrenalin and this glycosuria is associated with glycemia, like spontaneous diabetes. The thyroid gland, the hypophysis and the parathyroids have some connection with carbohydrate metabolism.

While the details of the complicated relationship of these various glands of internal secretion to the metabolism of sugar have not all been worked out, the following has been suggested as a working proposition: The liver and muscles are the great storehouses of glycogen. The pancreas, through its internal secretion, stimulates and controls the storing of the hepatic glycogen. The suprarenal secretion has the function of liberating glycogen in response to the needs of the system. The thyroid gland seems to possess an inhibitory influence upon the pancreas, lessening the control of the pancreas over the glycogen retention in the liver. The hypophysis seems to act like the thyroid; it sends inhibitory impulses to the pancreas. The parathyroids on the other hand have an action opposite to that of the thyroids. It is evident that the interlocking relationship of so many organs of carbohydrate metabolism must have some superior control. This is exercised by the sympathetic nervous system.

The work of Allen, however, seems to show that whatever part is played by other glands, the pancreas seems to be the dominating factor in the production of diabetes.

DIABETIC GANGRENE.

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Diabetes mellitus predisposes its victims to ulcerative and gangrenous conditions. While the cases are rare, they are of frequent enough occurrence to lead the physician to consider the possibility of diabetes in every case of carbuncle, sloughing ulcer or gangrene.

If localized gangrene occurs in a patient suffering from diabetes mellitus it is termed diabetic gangrene. The gangrene may involve any part of the body, but the lower extremity is the part usually affected. I have never seen the condition in any other part.

This type of gangrene is usually easily distinguished from senile, because it is moist while the latter is dry. However, in cases with arteriosclerosis, diabetic gangrene may be dry.

Just why diabetics are more subject to gangrene than others who are equally depleted by disease conditions has not been satisfactorily explained. A number of conditions of tissues results from the diabetes, any one of which might account for the trouble. Da Costa, in his Modern Surgery, gives the best discussion of these theories I could find. Much of what I have to say on this point is based on what I found in his book. The presence of sugar in the blood and in the serum from wounds not only lowers the resistance of the tissues to bacterial growth, but makes a good culture medium for bacteria. The following is an interesting point along this line: "J. C. Da Costa and Beardsley demonstrated that diabetes blood serum shows a lowered opsonic index for tubercle bacilli, staphylococci and streptococci." The above theory could account for the frequent occurrence of boils and carbuncles in diabetics. But in the few cases of typical gangrene I have seen, bacterial invasion was not at all active. Another theory is that lack of oxygen in the tissues is responsible. Another, that nerve degeneration is a factor. From the peculiar localization sometimes observed, it seems probable that the sympathetic of the part is affected. But why a single branch is affected is not explained. Arteriosclerosis is given as a cause. The fact that the condition occurs most frequently in elderly people will strengthen the claim that the condition of the arteries is largely responsible. Probably each of the factors are at times responsible. Da Costa says: "As in senile gangrene, a slight injury is apt to be the exciting cause. In such a case the urine contains sugar and perhaps albumen, but seldom either acetone or diacetic acid. In the other form an injury, perhaps a trivial one, is followed by a rapidly spreading celulitis which seldom forms pus and which eventuates in moist gangrene. In such cases the urine is apt to contain acetone and diacetic acid, and there is grave danger of coma."

The death of the tissue or part is frequently enough attended by severe neuralgic pains to make one suspicious that gangrene will eventuate if there is localized neuralgia or neuritis in an extremity in a patient suffering from diabetes.

In some cases the gangrene shows little tendency to spread. In others it spreads rapidly.

The presumption is that the patient is treating for the general condition. Any treatment of the gangrene is apt to be unsatisfactory. The local treatment should seek to prevent local infection as much as possible. If a line of demarcation forms it may be wise to help nature in clearing away the dead tissue. Avoid cutting unless it is necessary. If the gangrene is spreading and with no tendency to self-limitation, amputation of the limb becomes a necessity. If the foot is involved, the amputation should be in the lower third of the thigh. In some cases cure will result so far as the gangrene is concerned. In others the traumatism of the seemingly healthy tissue will lead to further gangrene.

THE TREATMENT OF TUBERCULOSIS OF THE SKIN.

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The treatment of this form of tuberculosis should begin, as in any other form, by good hygienic surroundings and constitutional measures. The general health should be observed and an anæmic or scrofulous condition corrected as far as possible by proper nourishment and cheerful surroundings. Fresh air, sunshine and easily digested and nourishing food are three cardinal rules of treatment.

Pure fresh air and sunshine are easily obtainable in our climate, but Nature has not dealt with us so generously in regard to food; and good milk rich in butter fat is sometimes hard to procure. The latter when at hand is relished by most people, while the justly celebrated cod-liver oil is quite often repugnant.

As to Local Treatment.

When complete destruction of the affected area with the invading bacilli can be obtained, a cure may be hoped for. This can be done surgically by complete extirpation or the nodules may be destroyed by the actual cautery or by nitrate of silver. The sharp curette in skillful hands is said to cure many cases.

Local caustics are used with much benefit, some of the most important being pyrogallic acid 15 per cent in ointment or collodian.

Salicylic acid 1 dram to ounce of glycerine or vaseline.

Chromic acid 10 grains to ounce.

Lactic acid 50 per cent painted over part has often cured.

Oleate of mercury 3 drams to ounce of zinc ointment is often curative.

The Finsen light and X-ray are now used with a great degree of success and are usually preferred.

Internal medication is believed by many to be beneficial and to hasten a cure.

Arsenicum album, arsenicum iodatum, iodide of potash, calcareo flouricum, nitric acid, phosphorus and sulphur may be mentioned as beneficial.

While the outlook in tuberculosis of the skin is often discouraging as to time spent in treatment or ultimate recovery, still in a large per cent of cases a cure may be expected and therefore the patient encouraged as to a final cure.

FEEDING OF THE TUBERCULAR PATIENT.

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The diet of a tubercular patient is of as much importance if not more so than fresh air. The most approved diet consists of three regular meals per day of ordinarily good, plain, wholesome, varied mixed food with lunches between consisting of eggs, milk, kumiss and beef juice or broth. The lunches are usually dispensed with when the patient attains his normal weight.

Meat, preferably beef and mutton, especially rare beef, is probably the best food, and at first should be eaten three times a day. Fresh eggs are also important and can be taken raw or cooked up to six a day. Pure milk may be taken in daily quantities of three or four pints, but drunk slowly. It should be taken very slowly on account of the curd which it forms in the stomach and if taken in large quantities will not be acted upon properly by the juice of the stomach. Bread, butter, cheese, vegetables of all sorts, salads and fresh and cooked fruits complete the dietary.

The meals should be chosen with care as to variety, tastefully and appetizingly prepared and served daintifully and punctually.

The patient should eat slowly and masticate well, for which his teeth should be put and kept in the best possible condition. He should eat just enough food and the right kind of food to enable him to gain about one or two pounds per week until the normal weight for his age and height is reached, and then just enough to maintain this. Many patients, however, do not gain on this

ordinary diet and can not digest it, but require special diets and extra food.

The best diet in the writer's experience is two to three pounds of beef a day and eaten in the form of rare beefsteak, rare roast beef, rare hamburger steak, raw meat chopped up with onions, celery, green peppers, etc., and raw scraped beef sandwiches. One-half hour before each meal the patient should take one cupful of hot water.

Eggs cooked or raw, plain or in milk, or as an eggnog or as an egg lemonade may be taken.

Milk raw or boiled, hot or cold, in large quantities or small, plain or with the addition of table salt, sodium citrate, lime water, bicarbonate of soda, malted milk, barley water or oatmeal water; one of the prepared foods, carbonated water, a little tea, coffee or brandy, peptonizing or pancreatizing powders or lactic acid bacilli or in the form of buttermilk or kumiss. One must be careful to avoid disturbing the digestion or injuring the kidneys.

DIET IN CHRONIC BRIGHT'S DISEASE.

VIDA Z. BAERECKE, M. D.,
DeLand, Fla.

In chronic parenchymatous as well as in chronic interstitial nephritis diet is one of the essential parts of the treatment. All writers agree that the diet should contain merely enough protein to supply the body-needs, at the same time possess the proper caloric value.

The minimum amount of protein required in twenty-four hours is about 80 to 100 grams; it does not matter so much whether that protein is taken in the form of milk, eggs, meat or as vegetable protein. Red meat, so long considered the most dangerous article of food for the nephritic, is no more harmful than white meat, the difference being an addition of blood that makes the color.

Two ounces meat, representing about 10 grams protein; *two eggs,* containing 12 grams, and *a quart of milk,* containing 30 to 35 grams, daily would leave a sufficient amount of protein to be supplied by vegetables, cereals and fruits.

The diet must be free from substances that irritate the kidneys, therefore beef extract, potted meats, sausage are prohibited; also condiments, spices, pickles, sharp vegetables and drinks, and alcohol. The latter is allowed in small quantities when a stimulant is needed. Cereals, vegetables, potatoes, fruits, fats and sugar may be safely given. The latter especially is an excellent addition as it has a high caloric value and no nitrogenous waste.

As to tea, coffee and tobacco, all may be allowed, unless they act as cardiac irritants, or cause insomnia.

This mixed diet has, of course, a distinct advantage above the milk diet, and we need only resort to that, or better to the cream-and-milk diet, when our patient is threatened with uremia. Overeating, however, is as great a danger as eating the wrong things; the body weight must be kept up, but not increased.

How about the restriction of fluids in these cases? It is necessary that the permeability of the kidneys to water is determined in every case. If it is good, shown by absence of œdema, the patient should receive enough fluid to bring the output of urine to three pints in the twenty-four hours, to insure good elimination of nitrogenous waste. In the interstitial variety, four pints would be better as the urine is less concentrated in these cases.

A minimum of salt is advocated especially in chronic parenchymatous nephritis, because in many of these cases the kidneys are impermeable to salt, and as nearly every individual consumes many times more salt than is necessary, the excess is retained in the system and with it sufficient water to maintain the proper molecular concentration (Widal's theory of œdema). Two grams sodium chloride is all what is required, that is as much as is contained in one quart milk, and no salt should be added to other food than what is used in bread-making.

In the interstial type salt restriction is not so essential, but every patient should acquire the habit of using a minimum quantity.

Following are daily menus, giving 80 to 100 grams protein, with caloric value of 2,500 to 3,000 (computed after the tables of Atwater and Bryant, U. S. Department Agriculture):

Breakfast—	*Protein in grams.*	*Calories.*
One Orange	1	75
Oatmeal	3	66
One Egg	6	80
Two Slices Bacon	5	170
Bread, 100 grams (3 ounces—3 slices)	9	270
Butter, 1-16 pound	1	230
Sugar, 3 teaspoonfuls	.	120
Cream, 1 ounce	1	30
Coffee	.	...
	26	1041
Dinner—		
Potatoes, 2 tablespoonfuls	2	110
Two Slices Tongue	5	100
Cauliflower, 2 tablespoonfuls	2	30
String Beans, 2 tablespoonfuls	1	20
Pudding { Macaroni, 1 ounce	4	125
Pudding { Milk	10	170
Pudding { Egg	6	80
Sugar, 2 teaspoonfuls	.	80
Butter, 1-16 pound	1	230
	31	945
Supper—		
Rice, 2 tablespoonfuls	3	112
Bread, 3 slices	9	270
Butter, 1-16 pound	1	230
Milk, 1 cup	10	170
Strawberries, 2 tablespoonfuls	1	80
Sugar, 2 teaspoonfuls	.	80
	24	900

Total: 81 grams protein; 2886 calories.

Breakfast—	*Protein in grams.*	*Calories.*
Apple	1	100
Oatmeal	3	66
Bread, 3 ounces—3 slices	9	270
Two Eggs	12	160
Milk, 1-3 quart	12	217
Sugar, 2 teaspoonfuls	.	80
	37	893
Dinner—		
Potatoes, 2 tablespoonfuls	2	110
Peas, 2 tablespoonfuls	7	120
Asparagus, 2 tablespoonfuls	2	85
Meat Roast, 1½ ounce—1 slice	7	120
Rice, 2 tablespoonfuls	3	112
Sugar, 2 teaspoonfuls	.	80
Milk, 1-6 quart	12	217
	33	844
Supper—		
Bread, 100 grams—3 slices	9	270
Butter, 1-16 pound	1	230
Milk, 1-3 quart	12	217
Prunes, 2 tablespoonfuls	1	82
	23	799

Total: 93 grams protein; 2536 calories.

PROPAGANDA FOR REFORM.

ABSORPTION AND EXCRETION OF MERCURY.—It may be regarded as clearly established that, in addition to the kidneys, the stomach may participate in this eliminatory function quite as well as the other portions of the alimentary tract. The occurrence of severe intoxications from the use of mercuric chloride in vaginal douches is likewise recognized. The absorption of mercury through the sound skin has been in dispute. To account for the efficacy of mercurial inunction, the contention has been made that the mercury thus applied is volatilized and absorbed through the lungs in greater part if not entirely. Experiments in the dermatologic laboratories of the Philadelphia Polyclinic leaves little doubt that the skin is an important, perhaps the most important path of absorption of mercury applied by inunction. (*Jour. A. M. A.*, Feb. 9, 1918, p. 392.)

ACETYLSALICYLIC ACID AND PHENYL SALICYLATE INCOMPATIBLE WITH ALKALIES.—In the presence of moisture, acteylsalicylic acid is decomposed by magnesium oxide (calcined magnesia), as is also phenyl salicylate (salol). Hence these drugs should not be combined with magnesium oxide in a prescription. (*Jour. A. M. A.*, Feb. 9, 1918, p. 410.)

AMERICAN-MADE ACETYLSALICYLIC ACID. At the request of the Council on Pharmacy and Chemistry an examination of the market supply of American-made acetylsalicylic acid has been made in the A. M. A. Chemical Laboratory by P. N. Leech. The investigation shows that there are on the American market, made by American firms, several brands of acetylsalicylic acid that are just as good as, if not better than, the widely advertised Aspirin-Bayer. About a year ago the Council on Pharmacy and Chemistry deleted Aspirin-Bayer from New and Nonofficial Remedies. Since the Bayer aspirin patent expired in February, 1917, thereby making it possible for manufacturers legally to produce and sell acetylsalicylic acid in the United States, the Council established standards for the quality of this unofficial drug. As a result,

the following products have been found to meet these requirements and are included in New and Nonofficial Remedies: Aspirin-L. and F., Acetylsalicylic Acid-Squibb, Acetylsalicylic Acid-Merck, Acetylsalicylic Acid-Milliken, Acteylsalicylic Acid-M. C. W., Acetylsalicylic Acid-Monsanto and Acetylsalicylic Acid-P. W. R. (*Jour. A. M. A.*, April 13, 1918, p. 1097.)

ANTIPNEUMOCOCCUS VACCINE. — The work by Lister in the diamond mines of Kimberley, South Africa, gives promise of a successful method of inoculation against lobar pneumonia. Lister finds that the pneumonia prevalent among the workers in the diamond mines is due mainly to three groups of pneumococci, and that inoculation with a vaccine made from the three groups prevents the occurrence of pneumonia as caused by members of these groups. (*Jour. A. M. A.*, April 20, 1918, p. 1163.)

ANTIPHLOGISTINE.—A. G. Gould, M. D., Plant Physician to the Goodyear Tire and Rubber Company, writes that after corresponding with the physicians in charge, he finds incorrect the claims of the Denver Chemical Manufacturing Company, regarding the use of Antiphlogistine by certain establishments. He asks: "Is there not some way that such exploitation of our large companies can be prevented?" (*Jour. A. M. A.*, Feb. 23, 1918, p. 557.)

BASY BREAD.—This is an asserted obesity cure put out by the Doctors' Essential Food Company, Orange, N. J. The advertising claims are extravagant and typical of other obesity treatment literature. Analyses indicated that in composition Basy Bread was similar to graham bread. Basy Bread sells for $1 a loaf. Dr. Wiley well sums up the case thus: "There is one way in which Basy Bread will reduce, that is, don't eat any of it nor much of it nor much of any other kind." (*Jour. A. M. A.*, Feb. 9, 1918, p. 407.)

BELL-ANS (Papayans, Bell). — "Are you going to sit there and let the other folks eat up all the good things just because you are afraid to pitch in, when 2 or 3 Bell-Ans taken before and after the meal would enable you to enjoy your share of all that's coming without a bit of discomfort or distress? Bell-Ans has restored the pleasures of the table to thousands who say: 'I can now eat anything and plenty of it, too.'" The New York *Tribune* comments that such advertisement as this is not limited to the evil effects to the misguided individual who eats lobster and ice cream at midnight and trusts to Bell-Ans to atone for his indiscretion. The most serious effect of such reckless advice is the example which the advertising sets to other advertisers. (*Jour. A. M. A.*, Feb. 23, 1918, p. 557.)

CALCIUM IODIDE IN TUBERCULOSIS. — There appears to be no work to indicate that the intravenous administration of calcium iodide in tuberculosis is of value. It has not been demonstrated that tuberculosis is associated with a deficiency of calcium. On the other hand, experiments demonstrate that the administration of calcium does not change the calcium content of the blood. Furthermore, there is no evidence to warrant the intravenous administration of iodides. (*Jour. A. M. A.*, Feb. 16, 1918, p. 481.)

CAMPHO-PHENIQUE. — The Secretary of the Harvard University Medical School received, from the Campho-Phenique Company of St. Louis, a letter stating that the concern wishes to supply the senior students of all Medical Colleges with samples of Campho-Phenique and Campho-Phenique powder and ointment, and asking the number of students and the name of every student in the graduating class. The Campho-Phenique concern believes in following the old advice, "Catching them young." In 1907, the Council on Pharmacy and Chemistry reported that Campho-Phenique (liquid) was exploited under a false "formula," that it was a solution of camphor and phenol in liquid petrolatum, and that for all practical purposes Campho-Phenique Powder was essentially a camphorated talcum powder containing apparently sufficient phenol and camphor to give the powder an odor. The report of the Council further brought out

that the Campho-Phenique Company was in effect one of the numerous trade names adopted by one James F. Ballard. Mr. Ballard seems to market a number of "patent medicines," for some of which Dr. Ballard has pleaded guilty in the federal courts to making false and fraudulent claims. (*Jour. A. M. A.*, Feb. 9, 1918, p. 408.)

FELLOWS' SYRUP, AND OTHER PREPARATIONS OF THE HYPOPHOSPHITES.—An advertisement for Fellows' Syrup reads: "Fellows' Syrup differs from other preparations of the hypophosphites. Leading clinicians in all parts of the world have long recognized this important fact. Have you? To insure results, prescribe the genuine ℞ Syr. Hypophos. Comp. Fellows'. Reject cheap and inefficient substitutes. Reject preparations 'just as good'." In truth, Fellows' Syrup is not like the better preparations of this type, since after standing it contains a muddy looking deposit that any pharmaceutical tyro would be ashamed of. Examination of the literature used in the exploitation of Fellows' Syrup fails to disclose any evidence to show that it has therapeutic value. Not only is there an entire absence of any evidence of its therapeutic value, but there is an abundance of evidence that the hypophosphites are devoid of any such therapeutic effects as they were formerly reputed to have, and that they are, so far as any effect based on their phosphorus content is concerned, singularly inert. As the result of its investigation of the therapeutic effects of the hypophosphites, the Council on Pharmacy and Chemistry concluded: There is no reliable evidence that they exert a physiologic effect; it has not been demonstrated that they influence any pathologic process; they are not "foods." If they are of any use, that use has never been discovered. (*Jour. A. M. A.*, Feb. 16, 1918, p. 478.)

GUAIODINE.—Examination of Guaiodine, a preparation of the Intravenous Products Co., Denver, in the A. M. A. Chemical Laboratory shows that, instead of containing free "colloidal" iodin as claimed, the preparation is essentially an iodated fatty oil, containing only combined iodin. The referee of the Committee on Pharmacology reported to the Council on Pharmacy and Chemistry that equally misleading, in view of the laboratory's findings, are the implied claims that the antiseptic action of Guaiodine corresponds to that of free iodin. Guaiodine is advertised chiefly for the treatment of gonorrhea by means of obviously false claims. The Council declared Guaiodine inadmissible to New and Nonofficial Remedies because of false statements as to composition and action. (*Jour. A. M. A.*, April 6, 1918, p. 1026.)

HALL'S CATARRH CURE.—Another victim fails to get the hundred dollars offered in cases in which this preparation failed to effect a cure. The promoters informed its victim that before paying the guarantee, he would have to prove that his case was one of simple catarrh not complicated by any other disease and that he had taken sufficient of the cure. (*Jour. A. M. A.*, April 13, 1918, p. 1113.)

LUMINAL.—Chemically, luminal is phenylethylbarbituric acid, and differs from veronal only in that one ethyl group is replaced by a phenyl group. Luminal is claimed to be a useful hypnotic in nervous insomnia and conditions of excitement of the nervous system. (*Jour. A. M. A.*, Feb. 23, 1918, p. 559.)

MISBRANDED NOSTRUMS.—The following are some "patent medicines" which the federal authorities held to be sold under false claims: Ascatoo, containing 13 per cent alcohol and some opium. Mexican Oil, containing over 57 per cent alcohol, together with essential oils, glycerin, red pepper, emodin, menthol and a small amount of opium alkaloids. Persil, containing 40 per cent alcohol. Though claimed to contain, in addition, asparagus, parsley, celery, buchu, and juniper berries, it contained no appreciable quantities of celery, buchu, juniper, asparagus or parsley. Dr. D. Kennedy's Favorite Remedy, containing 18 per cent alcohol, nearly 50 per cent sugar, and over 4 per cent potassium acetate, with methyl salicylate, aloes, licorice and oil of sassafras.

Our Standard Remedy, tablets containing rhubarb, senna, scoparius, licorice, red pepper and some ammonia compound with indications of aloes. Dr. King's Throat and Lung Balsam, claimed to relieve coughs and colds and consumptive patients in the last stages of the disease. "White Pine Expectorant" and "White Pine Balsam" (Allan-Pfeiffer Chemical Co.), a syrup containing alkaloid (probably morphin), chloroform, alcohol, benzoic acid and plant extract, but no extract or tar of white pine. California Tuna Tonic Tablets, pills containing iron carbonate and a small quantity of nux vomica alkaloids (strychnin, etc.). Alorine Antiseptic Suppository, containing quinin sulphate, boric acid and tannic acid. St. Joseph's Quick Relief, containing 32 per cent alcohol with Peru balsam, camphor and red pepper. "Andrews' Wine of Life Root or Female Regulator," containing over 14 per cent alcohol, sugar, methyl salicylate and tannin. "Andrews' Wine of Life Root Annex Powders," composed of sodium chloride and sodium bicarbonate, with a small amount of sodium carbonate. Clark Stanley's Snake Oil Liniment, a light mineral oil mixed with about 1 per cent of fatty oil, red pepper and possibly a trace of camphor and turpentine. (*Jour. A. M. A.*, April 20, 1918, p. 1183.)

NEOARSPHENAMINE.—The Federal Trade Commission has granted an importing license to the Diarsenol Company, Inc., 475 Ellicott Square, Buffalo, for neodiarsenol, the Canadian brand of neoarsphenamine. Licenses to manufacture neoarsphenamine have also been issued to The Takamine Laboratories, New York, to the Farbwerke-Hoechst Co., New York, and to the Dermatological Research Laboratories, Philadelphia. The safest and most effective products, provided one has mastered the technique, are the arsphenamines—not the neoarsphenamines. (*Jour. A. M. A.*, April 6, 1918, p. 1027.)

NEUROSINE AND THE ORIGINAL PACKAGE EVIL. — Neurosine advertisements ask that only original bottles of Neurosine be dispensed when physicians prescribe the nostrum. The reason is obvious: the bottle has the name blown in the glass and thus is an invitation to the patient to purchase more on his own initiative and also to recommend the preparation to his friends. The danger to the public from the self-administration of mixtures of bromides, such as Neurosine, is obvious. Neurosine is said to contain potassium bromid, sodium bromid, ammonium bromid, zinc bromid, extract of lupulin, fluidextract cascara sagrada, extract of henbane, extract of belladonna, extract of cannabis indica, oil of bitter almond and aromatic elixir. This chemical blunderbuss has been advertised for use in insomnia, hysteria, neurasthenia, migraine, etc., etc. It has also been recommended for children suffering from chorea. In all the years that Neurosine has been exploited to physicians with such remarkable claims, we have never seen a report of a careful clinical study in which the product has been used under the conditions which scientific investigation demands. (*Jour. A. M. A.*, April 27, 1918, p. 1251.)

PHENALGIN AND AMMONOL.—At the time that synthetic chemical drugs were coming into fame and when every manufacturer who launched a new headache mixture claimed to have achieved another triumph in synthetic chemistry, Ammonol and Phenalgin were born and duly christened with chemical formulas. However, one of the first reports of the Council on Pharmacy and Chemistry showed them to be mixtures composed of acetanilid, sodium bicarbonate and ammonium carbonate. Since then the unwarranted claims made for these preparations have been exposed repeatedly, and the danger of the indiscriminate use of headache mixtures pointed out. Despite the exposure of the methods used in exploiting Ammonol and Phenalgin, one finds just as glaringly false statements made in the advertisements of Phenalgin today as were made in its unsavory past. This would seem to indicate either that physicians have short memories or that they are strangely indifferent to the welfare of their patients, to their own reputation, and to the good name of medicine. (*Jour. A. M. A.*, Feb. 2, 1918, p. 337.)

PYXOL.—This is a proprietary preparation somewhat similar to the compound solution of cresol of the U. S. Pharmacopeia. In 1915 Pyxol was declared misbranded under the Insecticide Act. (*Jour. A. M. A.*, Feb. 23, 1918, p. 559.)

SOME NOSTRUMS.—Continuing its policy of giving the public the facts in regard to worthless, injurious or misleadingly advertised nostrums, the Louisiana State Board of Health has analyzed the following "patent medicines": Dermillo, a skin and complexion nostrum composed of zinc oxid, calcium carbonate, starch and salicylic acid in water, colored and perfumed. Wendell's Ambition Pills, a "great nerve tonic," containing strychnin, ferric oxid, pepper, cinnamon and ginger, and probably a little aloes. Orchard White, a toilet preparation to be mixed with lemon juice, reported to be a mucilage containing bismuth citrate, boric acid, alcohol and gum tragacanth. Exelento Quinine Pomade, a hair preparation found to consist chiefly of petrolatum, some liquid petrolatum, a trace of oil of gaultheria, sulphur, and among other things, a trace of quinin. Sloan's Liniment, which appeared to be composed essentially of oil of turpentine, oil of camphor, oil of sassafras and capsicum. Vick's Vap-O-Rub, which appeared to be a mixture of petrolatum with camphor, menthol and oil of thyme, eucalyptus and turpentine. La Creole Hair Dressing, a perfumed solution containing lead acetate, sulphur and glycerin, alcohol and water. Prescription A 2851 for Rheumatism, formerly said to have been known as Eimer and Amend's Rheumatic Remedy, which appeared to be a sherry wine containing 7.5 per cent potassium iodid. (*Jour. A. M. A.* April 6, 1918, p. 1024.)

UNDULY TOXIC ARSPHENAMIN.—In view of the reports in current medical literature of untoward results from the use of arsphenamin and neoarsphenamin, Dr. G. W. McCoy, Director of the U. S. Hygienic Laboratory, Washington, D. C., requests that samples of any lot of these arsenicals which have shown undue toxicity be forwarded to the Hygienic Laboratory for examination. (*Jour. A. M. A.*, April 13, 1918, p. 1110.)

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1917. Cloth. Price, postpaid, 50 cents. Pp. 169. Chicago: American Medical Association, 1918.

This volume contains the reports of the Council which were adopted and authorized for publication during 1917. It includes reports of the Council previously published in *The Journal of the American Medical Association* and also reports which, because of their highly technical character or of their lesser importance, were not published in *The Journal*.

In this volume the Council discusses the articles which were examined and found to be in conflict with the rules for admission to New and Nonofficial Remedies. Among these reports are discussions of such widely advertised proprietaries as Corpora Lutea (Soluble Extract), Wheeler's Tissue Phosphates, The Russell Emulsion and The Russell Prepared Green Bone, Trimethol, Eskay's Neuro Phosphates, K-Y Lubricating Jelly, Ziratol, Hepatico Tablets, Hemo-Therapin, Venosal, Surgodine and Kalak Water. A report on Iodeol and Iodagol covers fifty-one pages and illustrates the exhaustive investigation which the Council is often obliged to make of proprietary articles.

Similarly illustrative of the Council's thoroughness is the clinical study of Biniodol, a solution of mercuric iodid in oil, and the investigation of Secretin-Beveridge, made for the Council by the physiologist, Professor Carlson, of the University of Chicago. The volume also contains reports which explain why certain preparations, such as Alcresta Ipecac tablets, the German-made biologic products and antistaphylococcus serum, which were described in the last edition of New and Nonofficial Remedies, are not contained in the current 1918 edition. Those who wish to be informed in regard to proprietary remedies should have both the annual Council Reports and New and Nonofficial Remedies.

APPLICATION FOR APPOINTMENT
IN THE
MEDICAL RESERVE CORPS, U. S. ARMY

.....

....., 191.....

To the SURGEON GENERAL, U. S. Army,
Washington, D. C.

Sir:

I hereby make application to be examined for appointment in the Medical Reserve Corps, U. S. Army, and inclose testimonials as to my character and habits.*

I certify that to the best of my knowledge and belief I am laboring under no mental or physical infirmity or disability which can interfere with the efficient discharge of any duty which may be required of me if appointed in the Medical Reserve Corps, U. S. Army, and that the answers given to the interrogatories below are true and correct in every respect.

I furthermore state my willingness to proceed to such point for examination as may be designated by the Surgeon General, with the understanding that the journey entailed thereby must be made at my own expense.

INTERROGATORIES.

1. What is your name in full (including your full middle name)?.....

.....

2. What was the date of your birth?.....

3. Where were you born? (Give State and city or county; if foreign born, give country.....

.....

4. When and where were you naturalized? (For applicants of alien birth only.).....

.....

5. Are you married or single?..... 6. Have you any minor children; if so, how many?.....

7. What is your height, in inches?..... 8. Your weight, in pounds?.....

9. Give the nature and dates of all serious sicknesses and injuries which you have suffered?.....

.....

10. If either parent or brother or sister has died, state cause and age in each case:.....

.....

11. Do you use intoxicating liquors or narcotics; if so, to what extent?.....

12. Have you found your health or habits to interfere with your success in civil life?.....

13. What academy, high school, college, or university have you attended? State periods of attendance from year to year, and whether you were graduated, giving date or dates of graduation:

.....

.....

14. Name any other educational advantages you have had, such as private tuition, foreign travel, etc.:

.....

15. Give all literary or scientific degrees you have taken, if any, names of institutions granting them, and dates: .....

.....

16. With what ancient or modern languages or branches of science are you acquainted?.....

.....

*Testimonials as to character and habits from at least two reputable persons must accompany this application. Political recommendations are not necessary.

17. How many courses of lectures have you attended?..... Names of colleges and dates:
.....

18. When and where were you graduated in medicine? .....

19. Have you been before a State examining board? If so, state when, where and with what result: * .....

20. Are you a member of any State medical society? If so, give its name:.....
.....

21. Have you had service in a hospital? If so, state where and in what capacity, giving inclusive dates of each kind of service:.....
.....

22. What clinical experience have you had in dispensary or private practice?.....

23. Have you paid particular attention to any specialty in medicine; if so, what branch?.....

24. What opportunities for instruction or practice in operative surgery have you had?.....
.....

25. Have you previously been an applicant for entry into the United States service? If so, state when, where, and with what result (if rejected state why): .....
.....

26. Are you a member of the organized militia? If so, state with what organization and in what capacity: .....

27. Have you been in the military or naval service of the United States as cadet or otherwise? If so, give inclusive dates of service with each organization, designating it:.....
.....

28. What occupation, if any, have you followed other than that of student or practitioner?.....
.....

29. What is your present post-office address?.....

30. What is your permanent residence?.....

31. (Signature of applicant.).....

32. The correctness of all the statements made above was subscribed and sworn to by the applicant before me this.....day of....., 191.....

.....

.....

*This application must be accompanied by a certificate from the proper official that the applicant is duly registered to practice medicine in the State in which he resides.

FORM 149
W. D., S. G. O.
(Revised May 3, 1917)

APPLICATION FOR EXAMINATION FOR APPOINTMENT IN THE MEDICAL RESERVE CORPS, U. S. ARMY.

.....Inclosures.

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Fourth District—Duval, Clay, Nassau and St. Johns Counties: Gerry R. Holden, M. D., Jacksonville..1918
Fifth District—Citrus, Hernando, Lake, Marion and Sumter Counties: E. Van Hood, M. D., Ocala..1919
Sixth District—Hillsborough, Pasco and Pinellas Counties: Thomas Truelsen, M. D., Tampa.....1919
Seventh District—Brevard, Orange, Osceola, St. Lucie and Volusia Counties: David Forster, M. D., Hawks Park 1917
Eighth District—Alachua, Baker, Bradford, Levy and Putnam Counties: A. H. Freeman, M. D., Starke, 1920
Ninth District—Calhoun, Holmes, Jackson and Washington Counties: J. S. McGeachy, M. D., Chipley, 1918
Tenth District—DeSoto, Lee, Manatee and Polk Counties: R. L. Cline, M. D., Arcadia.....1920
Eleventh District—Dade, Monroe and Palm Beach Counteis: W. R. Warren, M. D., Key West...1921

COMMITTEE ON SCIENTIFIC WORK.
H. MASON SMITH, M. D.....Chattahoochee
JOHN S. HELMS, M. D.....Tampa
W. R. WARREN, M. D.....Key West

Next Meeting — Miami — May, 1919

THE SURGEON GENERAL OF THE ARMY.

With the announcement from Washington that Major General William C. Gorgas will reach the retiring age on October 3d of the present year, it is only natural that speculation would at once become rife as to who is likely to be nominated to succeed him as Surgeon General of the Army. It would seem to THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION, representing as it does the organized profession of this state, that *The Southern Medical Journal* has hit the nail squarely on the head under the editorial caption, "Surgeon General Gorgas is Sixty-Three Years Young." It should put at rest for all time the possibility of any other nomination being made, provided, of course, General Gorgas is willing to continue in active service. This unfortunate possibility has to be considered, and is reflected in a recent issue of the *Army and Navy Register*, where it is stated: "There has been some intimation that General Gorgas does not desire to continue in active service." That this worthy and honored member of the medical profession and of the Medical Corps of the United States Army is entitled to rest, no one will deny, whether or not the stress of the times will permit him to avail himself of this well-earned rest is, however, a matter for the Nation to decide. We believe that General Gorgas even in the approaching sunset of his life will be willing to make additional sacrifice, and continue to serve the Nation, aye the world, if he is called upon to do so. His retirement at this time would be little short of a national calamity—and why? It may be that to few men come the opportunities that have come into the life of General Gorgas. The stamping out of yellow fever in Havana, the sanitation of the Canal Zone to a point that made possible the greatest engineering feat in the history of the world, demonstrating at the same time that the white man may live in the tropics with impunity, provided he be protected from the ravages of certain tropical diseases, the con-

trol of that awful epidemic of septic pneumonia in South Africa, any one of these would be sufficient to place on the immortal role of honor the name of Gorgas, and it demonstrates beyond a doubt that if great opportunities have come into the life of this man, opportunities that come into the lives of few if any, that he has in each and every instance proven himself capable of grasping the opportunity, and not only in each instance place his name on the immortal role of honor, but in each instance to do a great deed of glory in the interests of humanity. And then came another grand opportunity to further demonstrate the possible achievements of the present Surgeon General of the Army.

We entered the dreadful holocaust of the world and to him was intrusted the immense task of building up, from practically nothing, an immense organization to take care of the sick and wounded that are already coming from the battlefields of Europe, and that are to keep on coming in increasing numbers. Without throwing any disparagement upon any other branch of the service, is there a department that is any more thoroughly organized today, or that gives better promise of standing the tests of efficiency that are to come, than the Medical Department of the Army? These are the reasons why we state that the retirement of General Gorgas at this time would be a national calamity, and these are the reasons why we now advocate that a memorial from the medical profession of the United States of America be prepared and sent to General Gorgas urging him to continue as the active head of the Medical Department of the United States Army. As *The Southern Medical Journal* states in the editorial previously referred to: "Millions of mothers and fathers and other relatives and friends of our soldiers thank God every day that General Gorgas is directing the army of doctors who are fighting diseases that are as dangerous and that are as insidious enemies to mankind as the Huns. They feel comforted every day on realizing that Gorgas is safeguarding the health and lives of their boys."

That General Gorgas will be the presidential choice for the next Surgeon General of the Army, providing he is willing to continue on active duty, there is no doubt; that he will be willing to make this sacrifice and accept further responsibilities, if the matter is placed clearly before him, is also a matter of certainty. Let the medical profession of this country speak in no uncertain manner, let it be known that organized medicine, while recognizing and appreciating the fact that he is entitled to retirement, joins with the millions of Americans having kith and kin on the European battlefields in appealing to him not to relinquish the rudder at this crucial moment in the history of the world.

AN IMPERATIVE APPEAL FOR MEDICAL OFFICERS.

An urgent and imperative appeal has just been issued by the Surgeon General of the United States Army, for doctors for the Medical Reserve Corps.

There are today 15,174 officers of the Medical Reserve Corps on active duty and the Medical Department has reached the limit of medical officers at the present time available for assignment. With these facts before the medical profession of this country, we believe that every doctor who is physically qualified for service between the age of twenty-one and fifty-five years, will come forward now and apply for a commission in the Medical Reserve Corps.

The Surgeon General says: "So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active or fighting phase, which will make enormous demands upon the resources of the country." The conservation of these resources, especially that of man-power, depends entirely upon an adequate medical service.

Drafts of men will continually follow drafts, each of which will require its proportionate number of medical officers and

there are at this time on the available list of the Medical Reserve Corps an insufficient number to meet the demands of these drafts.

The real necessity for the complete mobilization of the entire profession is imperative. It is not a question of a few hundred men volunteering for service, but of the mobilization of the profession for the conservation of the resources of this country. Let every doctor who reads this editorial and appeal from the Surgeon General, which appeal is based upon dire necessity, act promptly and present his application for a commission in the Medical Reserve Corps at the nearest Medical Examining Board. If you are not informed of the location of your Board, the Editor of this journal will advise you.

OUR COUNTRY'S CALL.

When our country entered the war the American Medical Association placed its services at the disposal of the Government: its entire machinery, its publication and its total resources—the state and county societies with their 81,000 members — for the purpose of organizing the medical profession for the war. To previous calls the profession has responded splendidly. We are confident that the same ready response will be made to this new call for 5,000 additional medical officers. The matter is considered in greater detail in the report of the action of the War Committee of the Association elsewhere in this issue. No one can prophesy what the duration of the war will be; it may be three years, it may be five years; it may demand three million or five million fighting men. But whatever may be the needs to secure victory, they will be supplied. And the medical profession will do its part. In Great Britain and in France the demands required drafting of all able-bodied men—even those past middle life; and this included the medical profession. While a similar draft on the manhood of this country may have to be made, we do not believe that it will be necessary to include the medical profession, for physicians will do voluntarily whatever they are called on to do. However, the time has come for deeds, not words; for action, not promises; for accomplishment, not prophecy. The time has come for every medical man under 55 years of age, who is physically qualified, to consider seriously for himself the question of his duty to his Government. In doing this, each one must realize that practically all who have thus far volunteered have done so at a sacrifice; in some instances the sacrifice has been small; in others, great. Patriotism and one's sense of duty to one's country have been the motives that have prompted the action of those who have joined the Medical Reserve Corps. This has been especially true when action meant sacrifice. That same spirit must and will prevail now.—*Jour. A. M. A.*

THE REGULAR MEDICAL CORPS—AN OPPORTUNITY

This is a call to the young medical men of America, to the men not yet established and who are seeking a career. The United States Army Medical Corps has eleven hundred vacancies; officers for six hundred and fifty of these are urgently needed now. It is not a sacrifice—the men who can answer this call are in any event practically within the draft age. It is a call to them to choose the Army medical service, not as a temporary vocation, but as a career. Today probably every young physician gives some thought to this choice. Few, however, consider the opportunity with a full knowledge of its advantages.

The medical officer is not only a physician, but a soldier. He has a double function and a double responsibility. The history of our Army medical department is full of examples of men who have fulfilled their responsibilities gloriously. The organization to which the young men are called is one of magnificent traditions, of scientific accomplishment, of transcendent present importance. It offers a position of regular employment, of fixed equable income, of steadily increasing ability, importance and emolu-

ment, of opportunity for individual study and recognition. The requirements for admission and the training of the men in the corps, the rank as an officer, insure a most desirable social atmosphere. There is association with well educated, scientific, progressive men and an absence of the petty social jealousies of civil life. The man who is personally fit can go far and achieve much.

The essential requirements are: (1) citizenship, (2) age between 22 and 32 years, (3) graduation from a well-organized medical school, (4) one year's hospital internship, and (5) good moral character and habits. Applicants must pass an examination not difficult for men who can meet the other requirements. If successful they receive a three months' training course with full pay and allowances.

This is a call first, to men who are not now in the Medical Reserve Corps, and second, to the younger Medical Reserve Corps officers. The first class have not done their duty by themselves or by their country. The second class have shown their patriotism and are no doubt already in the service or completing internships and awaiting call. They have been permitted to "sample the goods before purchasing." To them especially the service should appeal as a career. They too may make application for examination and transfer to the Regular Medical Corps. The Army and the nation need these men now. It does not ask of them the tremendous sacrifices made by the older men who have given up their homes, families, incomes, and perhaps their careers; it offers an established income and an enviable position.

Young men, this is your opportunity; seize it!—*Jour. A. M. A.*

OUR HONOR ROLL.

Our Honor Roll as published below now constitutes a grand total of one hundred and forty-four physicians. They are divided in the services as follows: Medical Corps—Lieutenant Colonel, 1; Medical Corps, National Army—Lieutenant Colonel, 1; Medical Reserve Corps—Majors, 14; Captains, 29; 1st Lieutenants, 95; total, 140. United States Navy—Passed Assistant Surgeons, 2; Assistant Surgeons, 4; total, 6. National Guard United States (Fla.) — Majors, 3; Captain, 1; 1st Lieutenants, 4; total, 8.

MEDICAL CORPS, U. S. ARMY.

Home Address.

Lieut.-Colonel Joseph Y. Porter.....Key West

MEDICAL CORPS, NATIONAL ARMY.

Lieut.Colonel Raymond C. Turck.....Jacksonville

MEDICAL RESERVE CORPS.

Major Frank E. Artaud.....Key West
Major M. H. Axline.....St. Petersburg
Major John E. Boyd .....Jacksonville
Major Frederick G. Barfield.....Jacksonville
Major Chauncey L. Chase .....Fort Dade
Major Stanley Erwin .....Jacksonville
Major James B. Griffin.....St. Augustine
Major H. H. Harris.....Jacksonville
Major Graham E. Henson.....Jacksonville
Major Frederick E. Jenkins.....Palatka
Major Frank R. Maura.....Ojus
Major Lucien B. Mitchell.....Tampa
Major Harry Peyton .....Jacksonville
Major George A. Plummer.....Key West
Captain A. E. Acker.....Jacksonville
Captain E. G. Birge .....Jacksonville
Captain H. O. Black .....Jacksonville
Captain Andrew R. Bond .....Tampa
Captain O. L. Callahan .....Mt. Dora
Captain T. Z. Cason.....Jacksonville
Captain Lester J. Efird .....Tampa
Captain Albert H. Freeman .....Starke
Captain Julian Gammon .....Jacksonville
Captain J. Halton .....Sarasota
Captain Henry Hanson .....Jacksonville
Captain Maurice E. Heck.....St. Augustine
Captain Samuel G. Hollingsworth.....Bradentown
Captain Owen H. Kenan .....Palm Beach
Captain S. M. R. Kennedy.....Pensacola
Captain William W. Mills .....Miami
Captain William B. Moon .....Lakeland
Captain Frederick C. Moor .....Tallahassee
Captain John MacDiarmid .....DeLand
Captain R. B. McLaws.....Tampa
Captain D. W. McMillan .....Pensacola
Captain John D. McRae.....Tampa
Captain Thomas A. Neal.....Sanford
Captain James B. Parramore.....Jacksonville
Captain James D. Pasco .....Jacksonville
Captain J. Y. Porter, Jr.....Key West
Captain G. M. Randall.....
Captain M. B. Swift .....Orlando
Captain Harry F. Watt .....Ocala
1st Lieut. Daniel M. Adams .....Panama City
1st Lieut. Allen M. Ames .....Pensacola
1st Lieut. C. A. Andrews .....Tampa
1st Lieut. Harold M. Beardall.....Orlando
1st Lieut. Henry P. Bevis.....Arcadia
1st Lieut. James H. Bickerstaff .....Pensacola
1st Lieut. John B. Black .....Jacksonville
1st Lieut. Everard Blackshear .....Citra
1st Lieut. Louis B. Bouchelle .....DeLand
1st Lieut. John T. Bradshaw.....San Antonio
1st Lieut. Percy H. Brigham .....Branford
1st Lieut. Herbert L. Bryans .....Pensacola

1st Lieut. B. A. Burks.....Titusville
1st Lieut. Fay A. Cameron .....Tampa
1st Lieut. Chauncey L. Chase .....Fort Dade
1st Lieut. Joseph H. Chiles .....Cleremont
1st Lieut. William A. Clark.....Pine Barren
1st Lieut. J. S. Coker.....Gardner
1st Lieut. Henry B. Cordes .....Jacksonville
1st Lieut. Charles S. Cooper.....St. Cloud
1st Lieut. Wallace P. Crigler .....Ocala
1st Lieut. T. G. Croft .....Jacksonville
1st Lieut. Clinton W. D'Alemberte .....Pensacola
1st Lieut. James S. Davidson .....Clearwater
1st Lieut. Kenneth McC. Davis.....Westbay
1st Lieut. Gaston Day .....Jacksonville
1st Lieut. L. B. Dickerson .....Clearwater
1st Lieut. George W. Dupree.....Blue Creek
1st Lieut. William T. Elmore .....Gainesville
1st Lieut. Orin O. Feaster .....Mulberry
1st Lieut. Necy L. Gachet .....Century
1st Lieut. Claude V. Gautier.....Passagrille
1st Lieut. Hugh St. C. Geiger.....Kissimmee
1st Lieut. H. M. Ginsberg .....Pensacola
1st Lieut. Paul Goss .....Mulberry
1st Lieut. O. F. Green .....Mayo
1st Lieut. John D. Griffin .....Lakeland
1st Lieut. G. H. Gwynn, Jr.....Tallahassee
1st Lieut. Humphrey Gwynn .....Tallahassee
1st Lieut. J. H. Hall.....Sopchoppy
1st Lieut. John Halliday .....Tampa
1st Lieut. Drew R. Handley .....Jacksonville
1st Lieut. MacMiller Harrison.....Palmetto
1st Lieut. John R. Hereford .....Fort Dade
1st Lieut. Frank P. Hixon .....Pensacola
1st Lieut. John C. Holley .....Pace
1st Lieut. H. F. Horne .....Jacksonville
1st Lieut. Roy Howe .....Daytona
1st Lieut. A. L. Izlar .....Ocala
1st Lieut. Edward Jelks .....Jacksonville
1st Lieut. Charles L. Jennings .....Jacksonville
1st Lieut. J. K. Johnston.....Tallahassee
1st Lieut. Charles L. Kennon.....Jacksonville
1st Lieut. Alpheus C. Koon .....Jacksonville
1st Lieut. William J. Lancaster.....Tampa
1st Lieut. Richard Leffers .....Lakeland
1st Lieut. Milford Levy.....Tallahassee
1st Lieut. John P. Long .....Lake City
1st Lieut. John W. McClane ..... St. Petersburg
1st Lieut. George S. McClellan.....Wellborn
1st Lieut. James R. McEachren.....Monticello
1st Lieut. Harry B. McEuen .....Quincy
1st Lieut. William G. McKay ..... Jacksonville
1st Lieut. Albert C. McKenzie.....Jacksonville
1st Lieut. Earle H. McRae .....Tampa
1st Lieut. H. R. Mills .....Tampa
1st Lieut. George M. Mitchell .....Jacksonville
1st Lieut. Joseph A. Mixon .....Pensacola
1st Lieut. H. P. Newman .....Bartow
1st Lieut. John A. Newnham .....Cleremont
1st Lieut. John K. Norwood .....Jacksonville
1st Lieut. Bascom H. Palmer.....Tampa
1st Lieut. Henry E. Parnell.....Fort Myers
1st Lieut. Archie R. Parrott .....Jacksonville
1st Lieut. James L. Pennington.....Fountain
1st Lieut. J. O. Philips .....Worthington Springs
1st Lieut. William H. Pickett.....Gainesville
1st Lieut. Harper L. Proctor .....Jacksonville
1st Lieut. Marion E. Quina .....Pensacola
1st Lieut. Shaler A. Richardson .....Jacksonville
1st Lieut. Dwight M. Rivers.....Lake City
1st Lieut. E. T. Sellers .....Jacksonville
1st Lieut. George W. Sherouse .....Campville
1st Lieut. E. E. Strickland .....Miccosukie
1st Lieut. Baldwin S. Stutts .....Port St. Joe
1st Lieut. G. C. Tillman .....Gainesville
1st Lieut. W. J. Vinson .....Tarpon Springs
1st Lieut. Harry C. VonDahm.....Jacksonville
1st Lieut. Adam C. Walkup .....McIntosh
1st Lieut. Archie Watson .....Live Oak
1st Lieut. B. L. Whitten .....Fort Pierce
1st Lieut. John M. Whitfield .....Malone
1st Lieut. William E. Whitlock.....Fort White
1st Lieut. Charlton C. Whittle .....Nocatee
1st Lieut. Daniel B. Williams .....Lake City
1st Lieut. Albert H. Wilhienson.....Jacksonville

THE NAVY.

Passed Assistant Surgeon W. P. Dey..Jacksonville
Assistant Surgeon Thomas S. Field....Jacksonville
Assistant Surgeon Boyd Gilbert.....Pensacola
Assistant Surgeon R. P. Henderson.....Tampa
Passed Asst. Surgeon J. Knox Simpson, Jacksonville
Assistant Surgeon D. C. Thompson.....Pensacola

NATIONAL GUARD UNITED STATES (FLA.).

Major Lorin Green .....Jacksonville
Major Ralph Green .....Jacksonville
Major James H. Livingston .....Jacksonville
Captain W. J. Buck .....Gainesville
1st Lieut. Daniel C. Campbell.....Marianna
1st Lieut. John R. Hawkins .....Williston
1st Lieut. Z. V. Johnson .....Milton
1st Lieut. J. M. Mitchell .....Millville

LITTLE CHILDREN DEPRIVED OF MILK.

That babies and little children are directly affected by the decreased sales of milk reported by dealers in American cities is illustrated by findings for Baltimore made public today by the Children's Bureau of the U. S. Department of Labor.

Of 756 Baltimore children between two and seven years of age, only 29 per cent are now having fresh milk to drink as against 60 per cent a year ago. And only 20, or less than 3 per cent of the children studied, are having as much as three cups a day. With the babies under two the Children's Bureau says the situation is a little less serious. Apparently their needs are more generally understood than the needs of the child over two.

The number of families in this group who are buying no fresh milk at all has risen from 37 a year ago to 107, or 29 per cent of those from whom information was secured, and these 107 families include one-fourth of all the children under seven. At the same time, the total daily purchase of canned milk by

the families studied has increased from 25.5 cans to 84 cans.

Most serious, according to the Children's Bureau, is the general substitution in the children's diet of tea and coffee. Of the 575 children who are not drinking milk, 64 per cent have definitely substituted tea and coffee, and 24 per cent are "sharing the family diet" which may or may not include tea or coffee, or milk in other foods.

While the group of families studied is small, the Bureau offers the findings as fairly representative since the information was secured and transmitted to the Children's Bureau by school nurses of the Baltimore Department of Health and by nurses of the Instructive Visiting Nurse Association and the Babies' Milk Fund of Baltimore from all families they visited during a certain short period, provided (1) there were at least two children under seven years of age; (2) the family had been in Baltimore at least a year; (3) no tubercular patient was living in the family.

Various incomes are reported but the changes in the amount of milk purchased are not unlike in the different earnings groups. Some mothers seem to realize that milk must be provided for their children at whatever sacrifice; others who can better afford to buy milk do not understand its importance and let their children go without it. The foreign-born mothers, although their incomes are slightly lower than the incomes of the native white mothers, have more generally than any other group continued to buy milk. Almost half of the foreign-born mothers have either continued the amount purchased last year or increased it, and only one in ten of the foreign mothers (as against one in three of the other mothers) are now buying no milk at all.

The Children's Bureau states: "Taking a pint and a half of fresh milk as the desirable daily allowance for the average child, these 756 children were having last year on an average only 40 per cent of what they should have had; this year their daily average has dwindled to 14.4 per cent of this allowance.

"The work of Children's Year should emphasize in every community the importance of fresh milk in the diet of young children. Without proper nourishment children can not keep well and free from physical defects, and a campaign of education on the feeding of children is an essential part of the saving of 100,000 lives during the second year of the war."

THE REHABILITATION OF DISABLED SOLDIERS.

The vocational and educational problems involved in the rehabilitation of disabled soldiers and sailors are analyzed and discussed by the Federal Board for Vocational Education in Senate Document 167, just published under the title "Rehabilitation of Disabled Soldiers and Sailors—Training of Teachers for Occupational Therapy."

Emphasis is placed on the immediate and pressing demand for the training of teachers of occupational therapy to take care of the handicapped men on their return from France. It is estimated that for every 1,000,000 men overseas, a minimum of 1,200 teachers will be needed. What must be the qualifications of these teachers in view of the experience of the belligerent countries; how they may be trained; what problems are to be met; and how they are to be met in the course of vocational rehabilitation; the social and economic aspects of rehabilitation; and the need for a national system for the rehabilitation of the maimed and crippled in industry as well as in war, are the main topics of the bulletin. The document is written by Elizabeth G. Upham, under the direction of Charles H. Winslow, assistant director for research of the Federal board.

The emergency program outlined in the report is summarized as follows:

The returned disabled men are divided into four classes: (1) those who are permanently invalided; (2) those who are able to work, but can not engage in competitive occupations; (3) those who must learn new occupations in the light of their handicaps;

(4) those who are able to return to their former occupations. About 80 per cent of all the disabled fall into the fourth group, and about 20 per cent into the third group. The first two groups are relatively small.

For group 1 the treatment prescribed is "invalid occupations," which are occupations that help pass the time and save the patient from brooding. For group 2, those who will in all probability be unable to compete in any line of work, simple occupations are prescribed to be carried on under the guidance of occupational therapeutists. Such occupations as wicker furniture-making, chair-caning, toy-making and semitrades, will be taught these men.

For the 20 per cent who must learn new occupations a more elaborate course of rehabilitation is suggested. This will include simple occupations such as are taught to the men of the second group, followed by courses in general education wherever necessary, and followed in turn by prevocational education, that is to say, elementary vocational education; and, lastly, by vocational education in whatever line is best adapted to the qualifications and handicap of the man.

A similar curriculum is proposed for the 80 per cent who will probably be able to return to their old occupations. Under the lead of the occupational therapeutist the patient will be gradually taught simple occupations, his general education will be "brushed up" and the deficiencies supplied, and he will be reeducated so as to resume his former trade in spite of his handicap.

The Federal board presents in this bulletin an outline of an emergency course covering eight weeks for the training of teachers to handle all four groups of disabled men. It is expected that a fraction of the disabled men themselves will serve as instructors. Nurses and teachers of arts and crafts will be available for the invalid occupation work; trained and selected women of education with previous experience in the arts, crafts and the "semitrades" will be drawn on to teach simple occupations to group 2. In addition to these, there will be need in groups 3 and 4 of vocational teachers, preferably men, and men and women teachers, in general education subjects, instructors in manual training, commercial subjects, mechanical drawing, drafting, etc. Teachers of each group should have had practical experience in hospitals or institutions, and it is recommended that teachers in groups 3 and 4 should have experience in the same line of work in the military hospitals of Canada.

That every dollar invested by the Government in the vocational rehabilitation of disabled soldiers and sailors will bring handsome returns in national efficiency is maintained in the report. "If the war should finally end in economic exhaustion," says the report, "that Nation will ultimately triumph which is best able to use over again her men. It is claimed that Germany uses 85 to 90 per cent of her disabled men back of the lines, and that the majority of the remaining 10 to 15 per cent are entirely self-supporting. Belgium, whose depletion has been the greatest, was the first nation successfully to use over again her men. Not only has the large Belgium reeducation center of Port Villez been self-supporting, but in addition it has paid back to the Belgian Government the entire capital cost of installation * * *.

"Economic necessity has made possible the results achieved in Belgium. For the other nations not so hard pressed the rehabilitation of the disabled and the strengthening of the vitality of the civil population may be an important and perhaps a determining point in their economic future * * *. It is certain that our own economic future depends to a large extent upon the rehabilitation of those disabled both in war and industry."

The bulletin discusses at length the possibilities of development of occupational therapy and the equipment needed for all the groups described. Suggested blanks for keeping the records in the curative workshops and for hospital registration are included.

WEIGH YOUR CHILD FOR THE GOVERNMENT.

The instruction for carrying out the Weighing and Measuring Test of American children under five years of age were sent today by the Child Welfare Department of the Woman's Committee of the Council of National Defense to its State and local child-welfare chairmen who will be responsible for the test in each community. The record cards will follow after word is received of the exact number required by each committee.

This test is the first feature of Children's Year which begins on April 6th. The plans for Children's Year prepared by the Children's Bureau of the U. S. Department of Labor include activities designed to protect all children from the special dangers of war time and to save the lives of 100,000 little children before April 6, 1919.

Many of the physical defects which caused the rejection of one-third of the men coming up for examination in the first draft are believed to date from some slight trouble neglected in early childhood. And the Children's Bureau emphasizes the fact that a higher standard of physical fitness in the rising generation can be assured only by greater attention to the physical condition of children.

According to the Bureau, height and weight and their relation to each other are a rough index of a young child's health and development. For instance, when a child is strikingly below the average weight for his height or is strikingly small for his age, it indicates that expert advice about diet and daily care is needed. In so far as the test makes it plain to parents that the physical condition of their children needs special attention, and in so far as it leads to community provision for public-health nurses and consultation centers for babies and young children, to a safeguarding of the milk supply, and to other measures for the protection of children, it will aid in conserving their health and in reaching the goal of 100,000 lives saved during Children's Year.

The record card which the Children's Bureau has prepared for this test gives a table of average heights and weights for boys and girls at birth, at every month of age from the 6th to the 48th and at every year from the 5th to the 16th. One-half of the card will be retained by the parents. It includes the table of heights and weights and has blanks for subsequent records so that parents can watch the child's growth; for while a single examination is valuable a series of examinations is far more valuable.

The other half of the card provides also for recording the height and weight of the child at the time of the national test. It will be used by the local committee in analyzing the facts about its own community and then it will be forwarded to the Children's Bureau at Washington.

Parents who wish to enter their children in the national test should communicate with the local chairman of the child-welfare committee of their State Council of National Defense, or if no such chairman has yet been appointed, with the county or State child-welfare chairman of the council. Local chairmen who have not received instructions about the test or the detailed program of which the test is the first feature should communicate at once with the child-welfare chairman of their State Council of Defense.

SUGAR IN WAR-TIME.

During recent months, many physicians have been asked regarding the possible effects of the various newly imposed or proposed dietary restrictions or innovations on the health of the individual. Despite the widespread acquiesence of our population in the dictates of the national and state food administrations, there is not unnaturally a frequent final appeal to the members of the medical profession for approval of such changes as have been proposed in the interest of the movement to help win the war. Among other plans for conservation, a reduction in the use of sugar has ben urgently requested and, indeed, made inevitable at times when

local shortage has curtailed the available supply so that the customary quota is not forthcoming. A summary compiled for the War Emergency Food Survey Section of the Bureau of Markets[1] furnishes facts that will enable us to draw conclusions more definite than those permitted by vague generalizations from intangible sources. The most pertinent information is that respecting the actual use of sugar in the United States in recent years. The amount consumed in 1917 was approximately 9,100,000,000 pounds, or 88.3 pounds per capita. In 1916 it amounted to 8,300,000,000, or 84.7 pounds per capita. It is thus apparent that if these statistics are correct there has been some increase in the consumption of sugar.

Eighty-eight pounds of sugar per capita used each year represent about 110 gm. (nearly 4 ounces) per day for every man, woman and child in this country. Expressed in terms of food fuel units this is equivalent to 440 calories, a not inconsiderable portion of the daily energy needs of an adult man. The sugar of the daily diet consumed in the measure indicated by the government statistics would furnish one-seventh of the food fuel where 3,000 calories are required, and even a larger proportion where the daily energy requirement is put on a lower basis. Four ounces of sugar, as the accusation now stands, is the calorific equivalent of two-thirds of a quart of good milk or of eight slices of bread approximating one-third of a pound.

When it is recalled that this great per capita consumption of sugar is largely a phenomenon of recent years and the result of the development of an industry whereby the price of the product has been lowered, the necessity for the inclusion of this carbohydrate up to one-seventh or even one-fifth of the daily energy requirement in the diet will obviously be questioned. Sugar is primarily used for its flavor rather than its fuel value. One American student of nutrition has even gone so far as to question the physiologic wisdom of the modern increased consumption of sugar. Thus Sherman[2] writes:

"The cheapening of a staple article of food, which is almost universally popular and which, like the refined sugar of commerce, is of uniform and well-known composition and practically free from danger of adulteration or harmful deterioration, would be a source of great satisfaction but for the fact that refined sugar constitutes an extreme case of a one-sided food, its sole nutritive function being to serve as fuel so that, as the energy requirement of the body is met to a larger and larger extent by the consumption of refined sugar there is a constantly increasing danger of unbalancing the diet and making it deficient in some of the substances which are needed for the building and repair of body tissue and for the regulation of physiological processes."

From a practical standpoint it is pointed out in a government bulletin[3] that in the American cuisine sugar is used with too many kinds of food, with a consequent loss of variety and piquancy of flavor in the different dishes. The nutty flavor of grains and the natural taste of mild fruits are very often concealed by the addition of large quantities of sugar.

Sugar is well utilized in the human organism; from the standpoint of cost its food value is very high, and its popularity need not be debated. But there is no consideration of nutrition that seriously demands so large an inclusion of sugar in the diet or forbids considerable reduction in its use, especially when the best interests of the civilized world demand it.—*Jour. A. M. A.*

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1. Sugar Supply of the United States: Its Extent and Distribution on Aug. 31, 1917, Circular 96, U. S. Dept. Agriculture, Office of the Secretary, Washington, Jan. 31, 1918.

2. Sherman, H. C.: Food Products, New York, 1914, p. 440.

3. Abel, Mary Hinman: Sugar as Food, Farmers' Bull. 535, U. S. Dept. Agriculture.

"CHILDREN FIRST."

"The results of underfeeding or indiscriminate food substitution in childhood are startlingly shown abroad as a result of the war, and are beginning to be evident in our own great cities." And "milk has no substitute in the diet of the child." These and other unqualified statements of the importance of guarding the milk supply to prevent the physical deterioration of American children during the war are scattered through the latest report issued by the Children's Bureau of the U. S. Department of Labor and entitled "Milk, the Indispensable Food for Children."

This report, with its striking figures showing a decrease in the amount of milk now available and in the amount which is finding its way to the children in poor homes, has special interest in connection with the campaign to save 100,000 lives of babies and little children during the second year of the war. It not only emphasizes the fact that children who are deprived of milk can not thrive properly, but it analyzes the changes in the production and export of dairy products during the war and shows the necessity of public action.

"The nourishment of our children is the first duty of the Nation. Since milk and milk products are a vital necessity for children, for nursing mothers, and for the sick and wounded, the public should be made to realize that the children's need for dairy products should be assured."

England and Italy have regulated the sale of cream and curtailed the use of butter, in order that their child population might receive the more adequate and economical nourishment offered by whole milk. Germany, early in the war, provided that the adult civilian population might have milk only after the needs of children, mothers, invalids, and the army were met.

The report discusses the various forms in which cows' milk may be used for children. For the young baby, it says, there is nothing so good as mother's milk.

"Never before in the history of civilization has it been so urgent a matter that every child should have breast-milk for as long a time as possible, in order that every child that survives birth may have the best chance for life and health."

But for children under two other than those breast-fed, and for older children, the report states that cows' milk is an absolute necessity if disease and death are to be kept within bounds and if the coming generation is to survive and to sustain the national standards. " 'Children first' should be part of the national food slogan."

"It is the duty now of every individual community to see that its children have milk of good quality and in sufficient amount to assure their normal development. To do this the price of milk must be controlled or fixed, and the milk supply to infants and children carefully safeguarded. The malnutrition of our children was, even before 1914, a serious national problem and one demanding urgent attention. Poverty and ignorance of dietary essentials have been ever-present factors in the malnutrition of the young, and war conditions can not fail to increase the gravity of the situation and the difficulties of maintaining the health of the Nation."

VOCATIONAL REEDUCATION.

That 100,000 out of every 1,000,000 soldiers sent overseas will return to the United States during the first year of fighting, and that 20,000 of these will need some kind of vocational reeducation or rehabilitation, is the estimate made by the Federal Board for Vocational Education in a report just published as Senate Document 166.

"Long before the close of activities in the summer of 1918, the return of men will begin, and vocational reeducation must start with the first men sent back, and must be developed as the number of men in hand for training increases," declares the report. "The development of facilities for undertaking vocational reeducation must, in fact,

anticipate the return of the men, since adequate provision can not be improvised after the men are actually in hand for training."

A comprehensive Federal system for the reeducation and placement in wage-earning occupations of every disabled soldier and sailor is presented by the Federal board. This plan involved a central administrative agency at Washington, the coordination with that agency or every Federal and State agency concerned and with similar public, semi-public and private agencies, the establishment of "curative workshops" for the treatment of war cripples, together with a complete system providing for subsistence and pay during the period of reeducation.

Basing its opinion on foreign experience, the report declares that "vocational rehabilitation can not be regarded as costing the community, except temporarily, anything whatever. The disability of the soldier or sailor is an economic handicap reducing productive power. Unless the men are vocationally reestablished, and to the extent that they are not completely reestablished, the economic loss to the community will be cumulative during a long period of years. Even a slight increase in vocational capacity, as a result of vocational training initiated during the period of convalescence, will result in an economic gain which, also, will be cumulative over a long period. This aggregate cumulative gain will certainly exceed any expenditures for vocational rehabilitation."

The increase of the earning power of the handicapped man, thus rendering him economically independent, is the ultimate object of this program.

The plea is made that "all the experience and all the special equipment required for emergency war work will be needed to provide for similar work in the vocational rehabilitation of men disabled in factories and workshops, of the victims of accident in all dangerous employments, and of the thousands of otherwise injured and crippled persons thrown upon the community each year. The number of such persons in normal times greatly exceeds the capacity thus far developed for their vocational rehabilitation."

In addition to the above it discusses methods of financing, organizing, and administering a national system of vocational rehabilitation; foreign experience and legislation are reviewed; and the proceedings of an inter-departmental conference held on the subject in Washington are summarized together with suggested legislation.

THE CHICAGO SESSION.

Section of Miscellaneous Topics to Consider Reeducation and Rehabilitation of Disabled Soldiers.

At its recent meeting the Council on Scientific Assembly arranged for meetings of the Section on Miscellaneous Topics, the subject to be taken up being the reeducation and rehabilitation of the disabled soldiers. Major Frank Billings, head of this division in the Surgeon-General's Office, has accepted the chairmanship of the section. The subject is one of great importance, especially to medical men. Further announcement will be made later.

Special General Meeting.

In addition to the patriotic meeting which will be held on Thursday evening, June 13, and which will be addressed by men prominent in public affairs, there will also be a general meting on Wednesday evening, June 12, at which eminent physicians who have been active in the medical military service of our nation and its allies will take part.

Section Meeting Places.

The tentative arrangements for places of meeting are as follows:

Section on Practice of Medicine.—Banquet Room, Hotel Morrison.

Section on Ophthalmology and on Laryngology, Otology and Rhinology.—Grand Ball Room and Red Room, respectively, Hotel La Salle.

Sections on Nervous and Mental Diseases and on Dermatology. — Ball Room and English Room, respectively, Blackstone Hotel.

The remaining Sections will be grouped, meeting in the Auditorium Theatre, the Auditorium Hotel and the Congress Hotel. The theatre will house in its main auditorium, the Section on Surgery, General and Abdominal, and in two smaller halls, the Sections on Genito-Urinary Diseases and on Gastro-Enterology and Proctology.

In the Auditorium Hotel, the Ball Room will be the meeting place of the Section on Pathology and Physiology, the Ladies' Parlor the meeting place of the Section of Pharmacology and Therapeutics, and the Section on Preventive Medicine and Public Health will meet in the banquet hall.

In the Congress Hotel, the Elizabethan Room will be the meeting place of the Section on Orthopedic Surgery and the Gold Room, the Section on Obstetrics, Gynecology and Abdominal Surgery; the Florentine Room, the Section on Diseases of Children, and the Green Room, the Section on Stomatology.

The Hotel Sherman will be the general headquarters where will be housed the Registration Bureau, the Information Bureau, the American Medical Association Branch Postoffice, as well as the Scientific and Commercial Exhibits.

In next week's issue the accommodations offered by these and the other hotels of Chicago for those who attend the annual session will be announced.

Cancer Department

"In the early treatment of cancer lies the hope of cure"

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

NEW FIELD OF INSTRUCTION.

The headquarters office has recently been in communication with the Department of Public Instruction of the Bureau of Commercial Economics, Washington, D. C., with regard to a plan for bringing the fundamental facts for the control of cancer to the attention of motion picture audiences throughout the country.

Mr. Francis Holey, the Director of the Bureau, assures us that if our organization will develop a picture of simple texts and a few illustrations, he will arrange for its circulation. He is confident that a very comprehensive lesson can thus be taught which will bring the public to a realization of the incidence of this disease and the necessity for its early eradication if the mortality from cancer is to be lowered.

DR. BRISTOL TO HEAD WORK FOR THE CONTROL OF CANCER IN MAINE.

Dr. L. D. Bristol, who was Chairman of the North Dakota Committee of the American Society for the Control of Cancer in 1916, has since last July been Commissioner of the State Department of Health in Maine, which, organized along the same lines as those of the Massachusetts and New York State Departments, has now taken the place of the former State Board of Health.

Dr. Bristol having kept in close touch with the problem of the control of cancer since leaving North Dakota, where he was Director of State Public Health Laboratories, formulated a plan for the free diagnosis of tissue for malignancy in the Maine State Laboratory, which went into effect on the first of January, 1918. It is reported that already there has been considerable demand for such service.

The Society has now designated Dr. Bristol as Chairman of our State Committee in Maine and he has been authorized to appoint members of a committee to promote the work in that state.

It will be recalled that Dr. Bristol, as Chairman of a special committee of this Society appointed to make a survey of the

existing public facilities in the several states for the examination of specimens of suspected cancerous tissue, was the author of the Committee's report on "Free Tumor Diagnosis as a Function of State Public Health Laboratories." That report, prepared as the basis for consideration of the need for and the means of a general extension of facilities for the laboratory diagnosis of cancer under public auspices, was distributed as No. 11 in the series of bulletins published by our organization.

A number of copies of the Bulletin are still available and may be had by any of our readers interested in the subject, upon request to the headquarters office of the Society.

MEMBERS OF THE CANCER SOCIETY'S LECTURE BUREAU TO BE CALLED UPON TO LECTURE TO CIVILIAN GROUPS ON "SOCIAL HYGIENE AND THE WAR."

In connection with the campaign to protect the Army by combating venereal diseases in civil communities, the Cancer Society has been asked by direction of Dr. Franklin Martin, Member of the Advisory Commission of the Council of National Defense and one of the Directors of our organization, to furnish a list of the medical men throughout the country who are on our Lecture Bureau and who from time to time present the work of the Society in addresses before lay and professional groups.

We are assured that our list of speakers will be very helpful as it is felt that the type of man who can speak well on this public health subject will be valuable in social hygiene work. Thanks for our cooperation in this matter have been extended by the Committee for Civilian Cooperation in Combating Venereal Diseases of the General Medical Board.

NEW AND NONOFFICIAL REMEDIES.

DICHLORAMINE-T (Monsanto).—A brand of dichloramine-T complying with the standards of New and Nonofficial Remedies. For a description of the actions, uses, dosage and chemical and physical properties see New and Nonofficial Remedies, 1918, p. 157. Monsanto Chemical Works, St. Louis, Mo. (*Jour. A. M. A.*, April 6, 1918, p. 999.)

GILLILAND'S CONCENTRATED AND REFINED DIPHTHERIA ANTITOXIN. — Marketed in syringes containing each 1,000, 3,000, 5,000, 7,500, 10,000, 15,000 and 20,000 units. Gilliland Laboratories, Ambler, Pa.

GILLILAND'S CONCENTRATED AND REFINED TETANUS ANTITOXIN.—Marketed in syringes containing each 1,500, 3,000 and 5,000 units. Gilliland Laboratories, Ambler, Pa. (*Jour. A. M. A.*, April 20, 1918, p. 1159.)

NORMAL HORSE SERUM. — Marketed in syringes each containing 10 c. c.; also in ampules containing from 10 to 100 c. c. as ordered. Gilliland Laboratories, Ambler, Pa.

ORIGINAL TUBERCULIN, "O. T." — Marketed in 1 c. c. vials. Gilliland Laboratories, Ambler, Pa.

SMALL-POX VACCINE. — Marketed in sealed capillary tubes, in packages containing one, five and ten tubes each. Gilliland Laboratories, Ambler, Pa.

TYPHOID VACCINE. — Marketed in packages containing three syringes, the first containing 500 million killed typhoid bacilli and the second and third containing each 1,000 million killed typhoid bacilli; in packages containing three ampules, the first containing 500 million killed typhoid bacilli, and the second and third containing each 1,000 million killed typhoid bacilli; also in ampules containing from 5 to 100 c. c. of the vaccine as ordered. Gilliland Laboratories, Ambler, Pa.

Publisher's Notes

ASCENDENCY OF THE AMPOULE.

As evidence of the favor with which the medical profession has come to regard the glaseptic ampoule, it is worthy of note that Parke, Davis & Co. now supply in this form more than eighty sterilized solutions for hypodermic use. The fact is significant when it is remembered that the "ready-to-use" solution is distinctly a modern institution, having its introduction in this country less than ten years ago.

Solutions in ampoules, it is obvious, have several advantages over those prepared in the ordinary way. They are ready for immediate use, any time, anywhere, there being no necessity to wait until water can be sterilized and cooled. Accuracy of dose is insured, each ampoule containing a definite quantity of medicament. The solutions are aspetic; they are permanent.

Parke, Davis & Co. publish an "Ampoules" brochure, a valuable little book of seventy pages, giving a list of their sterilized solutions, with therapeutic suggestions, dosage, descriptions of packages, prices, etc.* The work contains a useful therapeutic index and an informing chapter on hypodermic medication in general. Physicians and surgeons are advised to send to the Detroit laboratories of Parke, Davis & Co. for a copy of the book, requests for which are invited.

THE BULGARIAN BACILLUS AS A REMEDIAL AGENT.

A simple and effective remedy for the summer diarrheas and other common ailments of the intestinal canal is the Bulgarian bacillus. This was popularized a few years ago by the late Professor Metchnikoff, who pointed out that this organism, in the form of buttermilk, is extensively used by the Bulgarians, who have the reputation of being the longest-lived people in Europe. While this lactic acid organism is not, of course, a panacea for senility, it is a remedy of very great value for many intestinal affections. Clock and others have shown that by its use summer diarrheas of children can be controlled more quickly, and with less disturbance of the child's regular food than with any other remedy. It has also been recommended for intestinal indigestion, autotoxemia of intestinal origin, and even for such serious diseases as diabetes.

It is important to use a culture of the Bulgarian bacillus which you can depend upon. Galactenzyme (Abbott) is such a culture. This product is made from the type A organisms, of established virility, under the most careful, aseptic precautions. It is available both in tablet form and in bouillon. For ordinary use the tablets are generally preferred. We recommend a careful trial of Galactenzyme in cases of summer diarrhea. Now is the time to procure a supply.